

REMARKS/ARGUMENTS

Favorable reconsideration of this application is respectfully requested.

Claims 21-24 and 27-38 are pending in this application. Claims 25 and 26 are canceled without prejudice.

Claims 21-38 were rejected under 35 U.S.C. § 112, first paragraph. Claims 21-26 were rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. patent 5,196,835 to Blue et al. (herein "Blue") in view of U.S. patent 6,215,116 B1 to Van Marcke. Claims 27-38 were rejected under 35 U.S.C. § 103(a) as unpatentable over Blue and Van Marcke and in view of JP 09319501 to Fumihiko et al. (herein "Fumihiko").

Addressing now the rejection of claims 21-38 under 35 U.S.C. § 112, first paragraph, that rejection is traversed by the present response.

Claims 21-38 were rejected as the limitation introduced into claim 21 of a "second threshold value higher than the first threshold value" was not clearly described in the specification. In response to that position claim 21 is amended by the present response to no longer recite that feature. Thus, the rejection to claims 21-38 under 35 U.S.C. § 112, first paragraph, is believed to be obviated by the present response.

Addressing now the rejection of claims 21-26 under 35 U.S.C. § 103(a) as unpatentable over Blue in view of Van Marcke, and the further rejection of claims 27-38 further in view of Fumihiko, those rejections are traversed by the present response.

Claim 21 is amended by the present response to clarify features recited therein. Specifically, independent claim 21 now recites that the first threshold value is a "predetermined first threshold value", i.e. it is a fixed value, and "said second threshold value being changed in accordance with the distance between the pointer and the optical unit". Claim 21 now also recites "wherein a lowest level of said second threshold value enables detection of the pointer at a farthest point from the optical unit".

The above-noted features are believed to be fully supported by the original specification. For example page 16, lines 5-11 disclose setting a first “predetermined” threshold value. Further, page 19, lines 12-26 describe a second threshold value being changed based on a distance between an optical unit 5 and a designating device 4, and further a lowest threshold value being set such that the designating device 4 located at a farthest point from the optical unit 5 in the coordinate inputting/detecting area 3 can be detected.

The above-noted features clarified in independent claim 21 are believed to distinguish over the applied art.

Applicants respectfully submit that the applied art does not teach or suggest utilizing a first threshold value which is predetermined, i.e. is at a fixed level, and further utilizing a second threshold value that varies based on a distance between a pointer and an optical unit. With such a claimed feature a first threshold can be set to have a prescribed level that enables detection of a pointer regardless of its position.

Further, applicants respectfully submit that no motivation exists to combine the teachings of Blue and Van Marcke in the manner suggested in the Office Action. More specifically, Blue is directed to a method and apparatus to distinguish a valid touch from an optical aberration caused by unwanted objects and/or scratches in a light plane of an optical touch panel device.¹ Van Marcke is directed to a completely unrelated proximity detecting device that is particularly used for detecting the presence of a human or a human body part for activation of systems such as alarm systems, automatic door opening systems, counting devices, automatic bathroom fittings such as hand dryers, faucet devices, urinals, toilets, showers, soap dispensers, towel dispensers, wash fountains, etc.² Clearly such teachings in Van Marcke have no relevance whatsoever to a device such as in Blue that is not merely detecting for proximity but must detect a precise location of a valid touch.

¹ Blue, Abstract

² Van Marcke at column 1, lines 13-20.

Moreover, neither the teachings in Blue nor Van Marcke even address the benefits achieved by the claimed invention. The claimed invention provides an enhanced operation that can avoid a trailing phenomena on a printer image. Blue is more closely related to the claimed features than Van Marcke, but Blue merely teaches detecting a moving object such as a hand inserted into an infrared light and to address vibration thereof. Blue does not disclose, suggest, or even recognize a trailing phenomena problem that the claimed invention recognizes and addresses.

Moreover, applicants submit that the teachings in Van Marcke cannot even overcome the recognized deficiencies in Blue.

Van Marcke is cited to disclose the use of two thresholds, but Van Marcke discloses that the two thresholds are simply used to increase or decrease pulse-emitting power when a value of a returned and amplified detection pulse deviates from the thresholds. In addition, in Van Marcke such a control is executed after a moving objective is detected, see step S303 and S307, as well as when a valve is open, see step S308, so that the amplitude of the detection pulse can be accurately measured, see also column 11, lines 17-20. In other words, in Van Marcke the thresholds enable detection of the presence of the moving object on a condition that the amplitude of the detection pulse ranges between the thresholds.

However, in contrast to the claims as currently written, Van Marcke does not disclose or suggest that the first threshold of Van Marcke operates to detect the insertion of the moving object.

That is, in contrast to Van Marcke, in the claims as currently written when an insertion of a pointer generates a signal exceeding a first threshold the optical unit recognizes insertion of that pointer. Van Marcke does not disclose the first threshold therein utilized in that manner.

Further, in the claims as currently written it is the detection of the pointer exceeding a second threshold that results in calculating the coordinates of the pointer. Such a further operation is neither taught nor suggested by VanMarcke. Further, with such an operation in the claimed invention the coordinates are calculated only when the detection signal exceeds the second threshold, and as a result a tailing error can be suppressed.

Therefore, the two thresholds utilized in the claims as currently written differ from the thresholds in Van Marcke, and in such ways the claims as currently written are believed to further distinguish over the applied art.

In such ways, independent claim 21, and the claims dependent therefrom, are believed to clearly distinguish over Blue in view of Van Marcke. Moreover, no teachings in Fumihiko are believed to overcome the above-noted deficiencies of Blue in view of Van Marcke.

Moreover, applicants respectfully submit that the outstanding Office Action has not even properly considered the features asserted in the dependent claims, for example dependent claims 31-34. Those claims recite the use of reflection mirrors "each disposed on prescribed *sides* of the coordinate input-detecting area" (emphasis added). Such a feature clearly distinguishes over the applied art, and in particularly over the applied art to Blue as in Blue a reflection mirror is only provided at a tip of a pen. Thus, dependent claims 31-34 even further distinguish over the applied art.

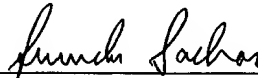
As no other issues are pending in this application, it is respectfully submitted that the present application is now in condition for allowance, and it is hereby respectfully requested that this case be passed to issue.

Respectfully submitted,

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